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ROUTING AND RECORD SHEET

INSTRUCTIONS: Officer designations should be used in the "TO" column. Under each comment a line should be drawn across sheet and each comment numbered to correspond with the number in the "TO" column. Each officer should initial (check mark insufficient) before further routing. This Routing and Record Sheet should be returned to Registry.

FROM:

NO.

O&T 56- 596

DATE

22 OCT 1956

OC-O&T/SB

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TO	ROOM NO	DATE		OFFICER'S INITIALS	COMMENTS
		REC'D	FWD'D		
1. Chief, OC-E			10-27	OB	
2. D.D.			10/24	JA	
3. R+I / LAB					For yr action
4.					
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DOC 19 REV DATE 2/2/60 BY 008632
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 ORIG CLASS 5 PAGES 4 REV 0000 C
 JUST 22 NEXT REV 2010 AUTH: HQ 73-2

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STANDARD FORM NO. 64

SECRET

Office Memorandum • UNITED STATES GOVERNMENT

TO : Chief, Engineering Division, OC

DATE: 10 10 1956

FROM : Chief, Operations and Training Division, OC

O&T 56- 596

SUBJECT: Operational Test Results on the TA-1

REF : (A) O&T 56-041
(B) O&T 55-797

1. A number of operational tests have been performed on the TA-1. While the unit functioned fairly well, we feel that with certain modifications it could be made a more valuable item of communications equipment.

2. Specifically the modifications we desire are the following:

a. A plastic shield around the tank coil. The positioning of the antenna impedance matching switch is such that the fingers almost invariably touch the tank coil and thus across B+.

b. An additional holding pin on the antenna connecting block. This block swivels in its socket and gets in the way when tuning the equipment.

c. A transmit-receive switch in place of the present breakin system employed. While we normally prefer breakin operation; we believe better performance can be obtained from the unit, both in the transmit and receive positions, if the earphone can be switched directly to the grid of the final tube in the receive position and out of the circuit entirely in the transmit position instead of being across the oscillator grid circuit. The present breakin system does not permit modification for the use of an external key; we desire that the unit be modified to permit the use of an external key.

d. The audio output of the present model is insufficient. The possibility exists that going to a transmit-receive switch as opposed to breakin operation would also improve this condition. Further investigation of methods to increase the audio output is desired in any case.

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e. Further investigation of the antenna output network is also desired. The unit was tested with a variety of antennas on a number of frequencies but gave loading indication on the lamp only at frequencies [redacted] A check on this using a 51-J receiver and the db meter incorporated in the receiver tends to show that the indications given by the lamp were correct. We were apparently radiating very little power at any frequency [redacted]

25X1

25X1

3. The prototype unit is returned with this memorandum. The BFO is inoperative due to a defective transistor. This was determined using the method given in the TA-1 instruction book. After the modifications requested have been made, we request that the unit be returned for further operational tests. If further information is desired contact [redacted]

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w/att

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PROJECT INITIATION FORM
R&D LABORATORY

PROJECT TITLE: Modification of TA-1

DATE DIRECTIVE RECEIVED: 26 October 1956 NOMENCLATURE: TA-1

DATE WORK STARTED ON PROJECT: 2 Nov. 1956 DATE REQUIRED: _____

PROJECT NUMBER: 2514-1 REPORT CLASSIFICATION: _____

EQUIPMENT CLASSIFICATION: Unclassified AUTHORITY: [] 25X1

SOURCE OF REQUEST: OC-O&T Memo 56-596 dated 22 October 1956

LIAISON CONTACT: [] QUANTITY REQUIRED: One 25X1

PRIORITY: I

TYPE OF EVALUATION: _____ ASSIGNED TO [] 25X1

DATE SUSPENDED OR CANCELLED: _____

DESCRIPTION OF PROJECT:

Modify the Transmitter Adaptor, TA-1, in accordance with the following items:

- (a) Place a plastic shield around the tank coil so that the operator's fingers cannot come in contact with the B plus voltage.
- (b) Install an additional holding pin for the antenna connecting block to eliminate the swivel in its socket.
- (c) Install a transmit-receive switch. Modify circuits ^{for} the use of this switch in place of the present break-in system.
- (d) Increase audio output level.
- (e) Investigate transmitter tank circuit and output network with a view toward increasing its power output []. If an increase in size of the unit is necessary, clear with OC-O&T before proceeding.
- (f) Repair transistor BFO.

PROJECT FOLDER FILED: Room #
Safe #
Drawer #

Man-Hours Expended:

Mechanical _____

Electrical _____

SIGNED []

DATE

31 October 1956

TA-1 - out 28 Feb 57

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